Amendments to the Specification

Please replace the paragraph on page 6, line 31 - page 7, line 7 with the following paragraph:

> It should be noted that in addition to relieving a system CPU from performing at least the initial incrementing state memory pattern, the inventive encryption accelerator is capable of accommodating multiple streams of data by, for example, operating in multiple modes. These operation modes include an Initial Mode and a Continuation Mode. When the accelerator is ~~operation~~ operating in the Initial Mode, the operations described above are performed sequentially, whereas in the Continuation mode, the state memory is loaded with the contents of the state memory that were saved when an earlier stream of data was interrupted. In either mode, when a Last Transfer flag is not set, the contents of the state memory are saved externally to the accelerator.

Please replace the paragraph on page 10, lines 17-19 with the following paragraph:

> FIG. 6 shows a flowchart detailing a process 600 for implementing the ARCFOUR algorithm by the accelerator 302 in accordance with an embodiment of the invention. The process 600 begins at 602 where the state machine is initialized. Next, at 603, an incrementing pattern is stored in the state memory. Next at 604, the index variables i and j are initialized. At 606, the state machine directs a shuffling operation, according to the ARCFOUR (or RC4) stream cipher, that includes, at 608, adding the contents of the i^{th} element of the state memory to the variable j and the nth element of the secret key array. The variable j is then set to the sum calculated in step 608 modulo 256. Next, at 610 the i^{th} and j^{th} elements of the state memory are swapped. At 612, the i^{th} index variable is incremented, and at 614 a determination is made whether or not the incremented index variable i is greater than the maximum allowable value. If the incremented index variable i is not greater than the max value, then the shuffling operation 606 continues, otherwise, the index variables i and j are initialized at 616 thereby completing the key setup portion of the ARCFOUR algorithm.

Please replace the paragraph on page 11, lines 1-12 with the following paragraph:

> FIG. 7 shows a flowchart detailing a process 700 for implementing the ciphering operation 618, according to the ARCFOUR (or RC4) stream cipher, of the process 600 shown in FIG. 6. The process [[800]]

700 begins at 702 by receiving a byte of the data to be encrypted and at 704 by incrementing the index variable i by one. The variable i is then set to the incremented value determined in step 704 modulo 256. The variable j is then set to the sum of j and the i^{th} element of the state memory modulo 256. Next, at 706, the contents of the i^{th} element of the state memory is added to the j^{th} element of the state memory while at 708 the i^{th} and j^{th} elements of the state memory are swapped. At 709, the i^{th} and the j^{th} elements of the state memory are added together to form a new value n. The variable n is then set to the value n determined in step 709 modulo 256. At 710, an encrypted output byte is formed by combining the nth element of the state memory with the data byte to be encrypted using a bit by bit exclusive OR operation. At 712, a determination is made whether or not there are additional bytes to be encrypted. If there are additional bytes, then control is passed back to 702, otherwise processing is stopped.